CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 95-054
NPDES NO. CA0038318

REISSUING WASTE DISCHARGE REQUIREMENTS FOR

CITY AND COUNTY OF SAN FRANCISCO
SAN FRANCISCO INTERNATIONAL AIRPORT WATER QUALITY CONTROL PLANT
AND NORTH BAYSIDE SYSTEM UNIT
SAN MATEO COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter the Board), finds that:

1. The City and County of San Francisco, hereinafter Discharger, submitted a report of waste discharge dated August 11, 1994 for reissuance of NPDES Permit No. CA0038318.

2. San Francisco International Airport is a member of the North Bayside System Unit (NBSU), which is the Joint Powers Authority responsible for operation of certain shared transport, treatment and disposal facilities. The NBSU includes the cities of Millbrae, Burlingame, South San Francisco and San Bruno, San Francisco International Airport (both industrial and domestic waste treatment plants), and Marine Magnesium Company. The joint effluent is dechlorinated prior to discharge to San Francisco Bay. The Airport's Water Quality Control Plant contributes approximately 4% of the NBSU flow.

3. During 1993 the Discharger discharged an average dry weather flow of approximately 0.72 million gallons per day (mgd) from its secondary treatment plant, the Water Quality Control Plant (WQCP), which has a current dry weather design capacity of 2.2 mgd. Treatment facilities consist of bar screens, grit chambers, one primary clarifier, aeration tanks, one secondary clarifier, and chlorination. This plant treats domestic wastewater from airplanes and the various facilities at the Airport. The treated wastewater is discharged into the combined NBSU forcemain-outfall with final disposal into the deep water channel of San Francisco Bay, a water of the state and the United States, northeast of Point San Bruno. The discharge is through a submerged diffuser about 5,300 feet offshore at a depth of 20 feet below mean lower low water (Latitude 37 deg., 39 min., 55 sec.; Longitude 122 deg., 21 min., 41 sec.).

4. The discharge is presently subject to NPDES Permit No. CA0038318 (Order No. 90-

005, adopted on January 17, 1990) which allows discharge into San Francisco Bay.

5. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on December 17, 1986. The Basin Plan identifies beneficial uses and water quality objectives for surface and ground waters in the region, as well as discharge prohibitions intended to protect beneficial uses.

6. The beneficial uses of San Francisco Bay are:

    Water contact recreation
    Non-contact water recreation
    Wildlife habitat
    Preservation of rare and endangered species
    Estuarine habitat
    Fish spawning and migration
    Industrial service supply
    Shellfish harvesting
    Navigation
    Commercial and sport fishing

7. Effluent limitations in this permit are based on the plans, policies, and water quality objectives and criteria of the Basin Plan, *Quality Criteria for Water* (EPA 440/5-86-001, 1986; Gold Book), Applicable Federal Regulations (40 CFR Parts 122 and 131), the National Toxics Rule (57 FR 60848, 22 December 1992; NTR), and Best Professional Judgment.

8. The effluent concentration limit for copper included in this permit is based on 4.9 μg/l copper as an interpretation of the narrative toxicity objective in the Basin Plan, based on best professional judgment. From a technical standpoint, 4.9 μg/l copper is currently the best available criterion that is protective of the most sensitive designated use of San Francisco Bay waters with respect to copper: habitat for aquatic organisms. The criterion is based on the Regional Board's study to develop a site-specific objective for copper, which employed the "water effect ratio" approach developed by the EPA. This approach provides a measure of the binding capacity of natural waters (dependent on particulate matter) relative to the binding capacity of reference waters (filtered oceanic water). The study and associated staff analysis are described in a September 25, 1992 Regional Board staff report entitled "Revised Report on Proposed Amendment to Establish a Site Specific Objective for Copper for San Francisco Bay."

9. In the early 1980's, the Board's Shellfish Program identified major shellfish beds existing along the San Mateo - Foster City shoreline. The NBSU joint outfall is located about six and one-half miles north of those beds. During the summers of 1982, 1983, and 1985, some of these beds were opened for direct recreational harvesting.

Members of the NBSU qualify for a less stringent coliform requirement of 240 MPN/100 ml (five sample moving median) and 2,400 MPN/100 ml (daily maximum). This determination is based on (1) recent studies by the Board that justify a less stringent coliform requirement (23 MPN/100 ml median, 240 MPN/100 ml max.) within 1,000 yards of the shellfish beds, and the fact that the NBSU outfall is located over six miles from the beds, (2) the fact that less stringent coliform requirements require reduced chemical uses, and (3) the fact that reduced use of chlorine for disinfection results in reduced levels of chlorinated by-products in the discharge.

10. The Discharger submitted a technical report entitled "Effluent Toxicity Study, San Francisco International Airport, Water Quality Control Plant," to the Board in December 1985. The report concluded that high concentrations of un-ionized ammonia was the source of effluent toxicity observed in the past. The report recommended controlling the pH or combining the WQCP's effluent with the effluent from the Discharger's Industrial Wastewater Treatment Plant in order to eliminate toxicity caused by un-ionized ammonia. The Discharger has proposed and Board staff have approved controlling the pH of the WQCP's effluent during toxicity testing.

11. Federal Regulations for stormwater discharges were promulgated by the U.S. Environmental Protection Agency on November 19, 1990. The regulations [40 Code of Federal Regulations (CFR) Parts 122, 123, and 124] require specific categories of industrial activity (industrial storm water) to obtain a NPDES permit and to implement Best Available Technology Economically Available (BAT) and Best Conventional Pollutant Control Technology (BCT) to control pollutants in industrial stormwater discharges.

    The storm water flows from the wastewater treatment facility process areas are directed to the wastewater treatment plant headworks and treated along with the wastewater discharged to the treatment plant. These stormwater flows constitute all industrial storm water at this facility and consequently this permit regulates all industrial storm water discharges at this facility.

12. The WQCP is equipped with two aeration basins, but it includes only one primary clarifier and one secondary clarifier. When either clarifier needs to be taken out of service for routine or emergency maintenance, the Discharger does not fully treat the wastewater, and must report a bypass to the Board. The WQCP currently does not have adequate redundancy to avoid such bypasses, which are prohibited under Discharge Prohibition A.2. To bring treatment reliability to acceptable standards, Provision E.7 of the permit, below, requires the Discharger to construct one primary and one secondary clarifier according to an aggressive time schedule.

13. An Operations and Maintenance Manual is maintained by the Discharger for purposes of providing plant and regulatory personnel with a source of information describing all equipment, facilities, recommended operation strategies, process control monitoring,

and maintenance activities. In order to remain a useful and relevant document, the manual should be kept updated to reflect significant changes in treatment facilities or operational procedures.

14. This Order serves as an NPDES Permit, adoption of which is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.

15. The Discharger and interested agencies and persons have been notified of the Board's intent to reissue requirements for the existing discharge and have been provided with the opportunity for a public hearing and opportunity to submit their written views and recommendations.

16. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act as amended and regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. Discharge at any point at which the wastewater does not receive an initial dilution of at least 10:1 is prohibited.

2. Bypass or overflow of untreated or partially treated wastewater to waters of the State either at the treatment plant or from any of the collection or transport system or pump stations tributary to the treatment plant or outfall is prohibited.

3. The average dry weather flow shall not exceed 2.2 mgd. This average shall be determined over three consecutive dry weather months each year.

B. Effluent Limitations

1. Effluent discharged into the combined forcemain-outfall shall not exceed the following limits:

Constituent	Units	Monthly Average	Weekly Average	Daily Maximum	Instantaneous Maximum
a. Carbonaceous Biochemical Oxygen Demand, 5-day ($CBOD_5$, 20°C)	mg/l	25	40	50	---
b. Total Suspended Solids	mg/l	30	45	60	---
c. Oil & Grease	mg/l	10	---	---	20
d. Settleable Matter	ml/l-hr	0.1	---	---	0.2
e. Total Chlorine Residual[1]	mg/l	---	---	---	0.0

[1] Requirement defined as below the limit of detection in standard test methods defined in *Standard Methods for the Examination of Water and Wastewater.*

2. **85 Percent Removal, BOD and TSS:** The arithmetic mean of the carbonaceous biochemical oxygen demand (five-day, 20°C) and total suspended solids values, by weight, for effluent samples collected in each calendar month shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected at approximately the same times during the same period (85 percent removal).

3. **pH:** The pH of the discharge shall not exceed 9.0 nor be less than 6.0.

4. **Acute Toxicity:** The survival of organisms in undiluted effluent shall be an 11-sample median value of not less than 90 percent survival, and a 90th percentile value of not less than 70 percent survival. The 11-sample median and 90th percentile effluent limitations are defined as follows:

   11-sample median: If five or more of the past ten or fewer samples show less than 90 percent survival, then survival of less than 90 percent on the next sample represents a violation of the effluent limitation;

   90th percentile: If one or more of the last ten or fewer samples show less than 70 percent survival, then survival of less than 70 percent on the next sample represents a violation of the effluent limitation.

   Compliance with this limitation may be demonstrated after the effluent pH has been adjusted to minimize the concentration of un-ionized ammonia.

5. **Total Coliform Bacteria:** The moving median value for the Most Probable Number (MPN) of total coliform bacteria in any five (5) consecutive effluent samples shall not

exceed 240 coliform organisms per 100 milliliters (240 MPN/100ml). Any single sample shall not exceed 2,400 MPN/100ml.

6. **Toxic Pollutant Effluent Limitations:**

Representative samples of the effluent shall not exceed the following limits[1]:

Constituent[2]	Monthly Average[3]	Daily Average[3]
Arsenic	---	200
Cadmium	---	30
Chromium (VI)[4]	---	110
Copper	---	37
Lead	---	53
Mercury	0.21	1
Nickel	---	65
Selenium	---	50
Silver	---	23
Zinc	---	580
Cyanide[5]	---	10
Phenol	---	500
Polynuclear Aromatic Hydrocarbons[6]	0.31	150

[1] As, Cd, Cr, Hg (daily avg.) and Zn are based on plant performance. All other limits are based on marine water quality objectives, and are intended to be achieved through secondary treatment and, as necessary, pretreatment and source control.

[2] All analyses shall be performed using current EPA Methods, as specified in *Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods*, SW-846, Third Edition. Detection limits, practical quantitative levels, and limits of quantitation will be taken into account in determining compliance with effluent limitations.

[3] Limits apply to the average concentration of all samples collected during the averaging period (Daily - 24-hour period; Monthly - Calendar month).

[4] The Discharger may meet this limit as total chromium.

[5] The Discharger may demonstrate compliance with this limit by measurement of weak acid dissociable cyanide.

[6] PAHs shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[a,h]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene, and pyrene.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in the waters of the State at any place:

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths;

   c. Alteration of temperature, turbidity, taste, odor, or apparent color beyond present natural background levels;

   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

a. Dissolved Oxygen	5.0 mg/l minimum. Median of any three consecutive months shall not be less than 80% saturation. When natural factors cause lesser concentrations than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
b. Dissolved Sulfide	0.1 mg/l maximum.
c. pH	Variation from ambient pH by more than 0.5 pH units.
d. Un-ionized Ammonia	0.025 mg/l as N (annual median) 0.4 mg/l as N (maximum)
e. Nutrients	Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

3. The Discharger shall not cause a violation of any applicable water quality objective (standard) for receiving waters adopted by the Board or the State Water Resources

Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Sludge Management Practices

1. All sludge generated by the discharger must be disposed of in a municipal solid waste landfill, reused by land application, or disposed of in a sludge-only landfill in accordance with 40 CFR Part 503. If the discharger desires to dispose of sludge by a different method, a request for permit modification must be submitted to the EPA 180 days before start-up of the alternative disposal practice. All the requirements in 40 CFR 503 are enforceable by EPA whether or not they are stated in an NPDES permit or other permit issued to the discharger.

2. Sludge treatment, storage, and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, or result in ground water contamination.

3. Duty to mitigate: The discharger shall take all reasonable steps to prevent or minimize any sludge use or disposal which has a likelihood of adversely affecting human health or the environment.

4. The discharge of sewage sludge shall not cause waste material to be in a position where it is, or can be carried from the sludge treatment and storage site and deposited in the waters of the State.

5. The sludge treatment and storage site shall have facilities adequate to divert surface runoff from adjacent areas, to protect boundaries of the site from erosion, and to prevent any conditions that would cause drainage from the materials in the temporary storage site. Adequate protection is defined as protection from at least a 100-year storm and protection from the highest possible tidal stage that may occur.

6. Sludge that is disposed of in a municipal solid waste landfill must meet the requirements of 40 CFR 258. In the annual self-monitoring report, the discharger shall include the amount of sludge disposed of, and the landfill(s) to which it was sent.

7. Permanent sludge storage or disposal activities are not authorized by this permit. A Report of Waste Discharge shall be filed and the site brought into compliance with all applicable regulations prior to commencing any such activity.

8. The Board may amend this permit prior to expiration if changes occur in applicable state and federal sludge regulations.

E. Provisions

1. Requirements prescribed by this Order supersede the requirements prescribed by Order No. 90-005. Order No. 90-005 is hereby rescinded.

2. The two dischargers named in this Order shall be responsible for compliance with the requirements and provisions for discharges over which they have control. The San Francisco International Airport shall comply with requirements relating to the discharge from its Water Quality Control Plant, and the North Bayside System Unit shall comply with requirements relating to the discharge of the combined effluents.

3. Where concentration limitations in mg/l or μg/l are contained in this Permit, the following Mass Emission Limitations shall also apply.
(Mass Emission Limit in kg/day = (Concentration Limit in mg/l) x (Actual Flow in million gallons per day averaged over the time interval to which the limit applies) x 3.78 (conversion factor).

4. This permit may be reopened to amend the effluent limit for copper once the site-specific water quality objective for copper for San Francisco Bay is fully effective.

5. The discharger shall comply with all sections of this Order immediately upon adoption.

6. **Compliance with Acute Toxicity Effluent Limitation**

   a. Compliance with Effluent Limitation B.4 (Acute Toxicity) of this Order shall be evaluated by measuring survival of test fishes exposed to undiluted effluent for 96 hours in flow-through bioassays. Each fish species represents a single bioassay.

   b. Two fish species will be tested concurrently. These shall be the most sensitive species determined from a single screening (all tests must be completed within ten days of initiating the first test) of three species: three-spine stickleback, rainbow trout and fathead minnow. The three species screening requirement can be met using either flow-through or static renewal bioassays. The Board may consider allowing compliance monitoring with only one (the most sensitive, if known) fish species, if the following condition is met:

      1) The discharger can document that the acute toxicity limitation, specified above, has not been exceeded during the previous three years, or that acute toxicity has been observed in only one of two fish species.

   c. All bioassays shall be performed according to protocols approved by the EPA

or State Board, or published by the American Society for Testing and Materials (ASTM) or the American Public Health Association.

7. **Construction of Primary and Secondary Clarifiers**

The Discharger shall bring treatment reliability to acceptable standards by designing and building one primary clarifier and one secondary clarifier. Because this plant expansion is for redundancy purposes, there will be no increase in treatment capacity commensurate with the addition of these treatment units. For each of the below listed tasks, the Discharger shall submit a technical report acceptable to the Executive Officer on the required date, documenting completion of the task.

Task	Date
a. Certification of Design Consultant and Commencement of Design Work	5/1/95
b. Completion of Final Engineering Design of Primary and and Secondary Clarifiers	1/1/96
c. Award Construction Contract	3/15/96
d. Complete Construction	6/1/97
e. Full Operation	1/1/98

8. **Toxic Pollutants Special Study**

The Discharger shall submit a technical report acceptable to the Executive Officer summarizing the results of a minimum of six (6) effluent sample analyses for the constituents listed in Table 2 of the attached Self-Monitoring Program (three in wet season and three in dry season), with the exception of TCDD Equivalents [dioxin] for which three (3) analyses shall be sufficient. For each constituent, the report shall include the limit of quantitation (LOQ), method detection limit (MDL), and practical quantitation limit (PQL) achieved at the SFIA WQCP laboratory. For constituents analyzed by contract laboratories, MDLs and PQLs should be provided to the SFIA WQCP by the contract laboratories, and included in this technical report. The technical report shall contain recommendations on effluent sampling and analysis, both with respect to type and frequency of analysis. This NPDES permit shall be subsequently modified to include effluent sampling for the subject constituents.

9. The Discharger shall review, and update as necessary, its Operations and Maintenance Manual, annually, or within 90 days of completion of any significant facility or process changes. The Discharger shall submit to the Board, by April 15 of each year, a letter describing the results of the review process including an estimated time schedule for completion of any revisions determined necessary, and a description or copy of any completed revisions.

10. Annually, the Discharger shall review and update as necessary, its Contingency Plan as required by Board Resolution 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or adequately implement a contingency plan will be the basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code. Plan revisions, or a letter stating that no changes are needed, shall be submitted to the Board by April 15 of each year.

11. The Discharger shall implement a program to regularly review and evaluate its wastewater collection, treatment and disposal facilities in order to ensure that all facilities are adequately staffed, supervised, financed, operated, maintained, repaired, and upgraded as necessary, in order to provide adequate and reliable transport, treatment, and disposal of all wastewater from both existing and planned future wastewater sources under the discharger's service responsibilities. A Treatment Facilities Evaluation Program report discussing the status of this evaluation program, including any recommended or planned actions, shall be submitted to the Board by April 15 of each year.

12. The discharger shall comply with the **Self-Monitoring Program** for this order, as adopted by the Board and as may be amended by the Executive Officer.

13. The discharger shall comply with all applicable items of the attached "**Standard Provisions and Reporting Requirements**" dated August 1993, or any amendments thereafter.

14. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the discharger, the discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.

    To assume operation of this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. (Refer to Standard Provisions, referenced above). The request must contain the requesting entity's full legal name, the address and telephone number of the persons responsible for contact with the Board and a statement regarding responsibility for compliance. The statement shall comply with the signatory paragraph described in Standard Provisions and state that the new owner or operator assumes full

responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, which is a violation of the California Water Code.

15. The Board may modify, or revoke and reissue, this Order and Permit if present or future investigations demonstrate that the discharge(s) governed by this Order are causing or significantly contributing to adverse impacts on water quality and/or beneficial uses of the receiving waters.

16. This Order expires on March 15, 2000. The discharger must file a report of waste discharge in accordance with Title 23, Division 3, Chapter 9, Article 3. of the California Administrative Code not later than 180 days before this expiration date as application for reissuance of waste discharge requirements.

17. This Order shall serve as a National Pollutant Discharge Elimination System (NPDES) permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after the date of its adoption provided the Regional Administrator, EPA, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on March 15, 1995.

STEVEN R. RITCHIE
Executive Officer

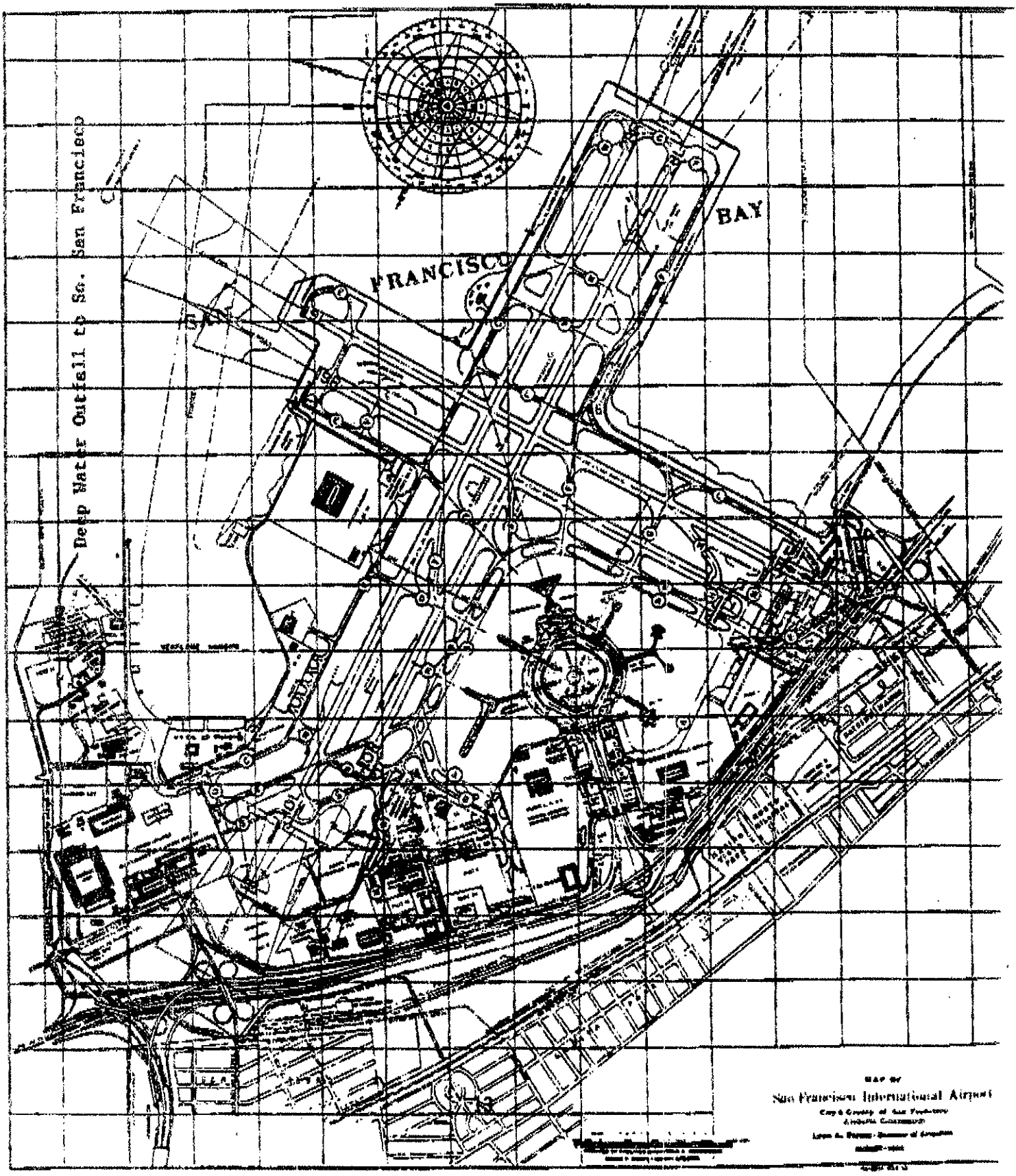
Attachments:

A. Location/Site Maps
B. Process Schematic
C. Self-Monitoring Program
D. Standard Provisions and Reporting Requirements - August 1993

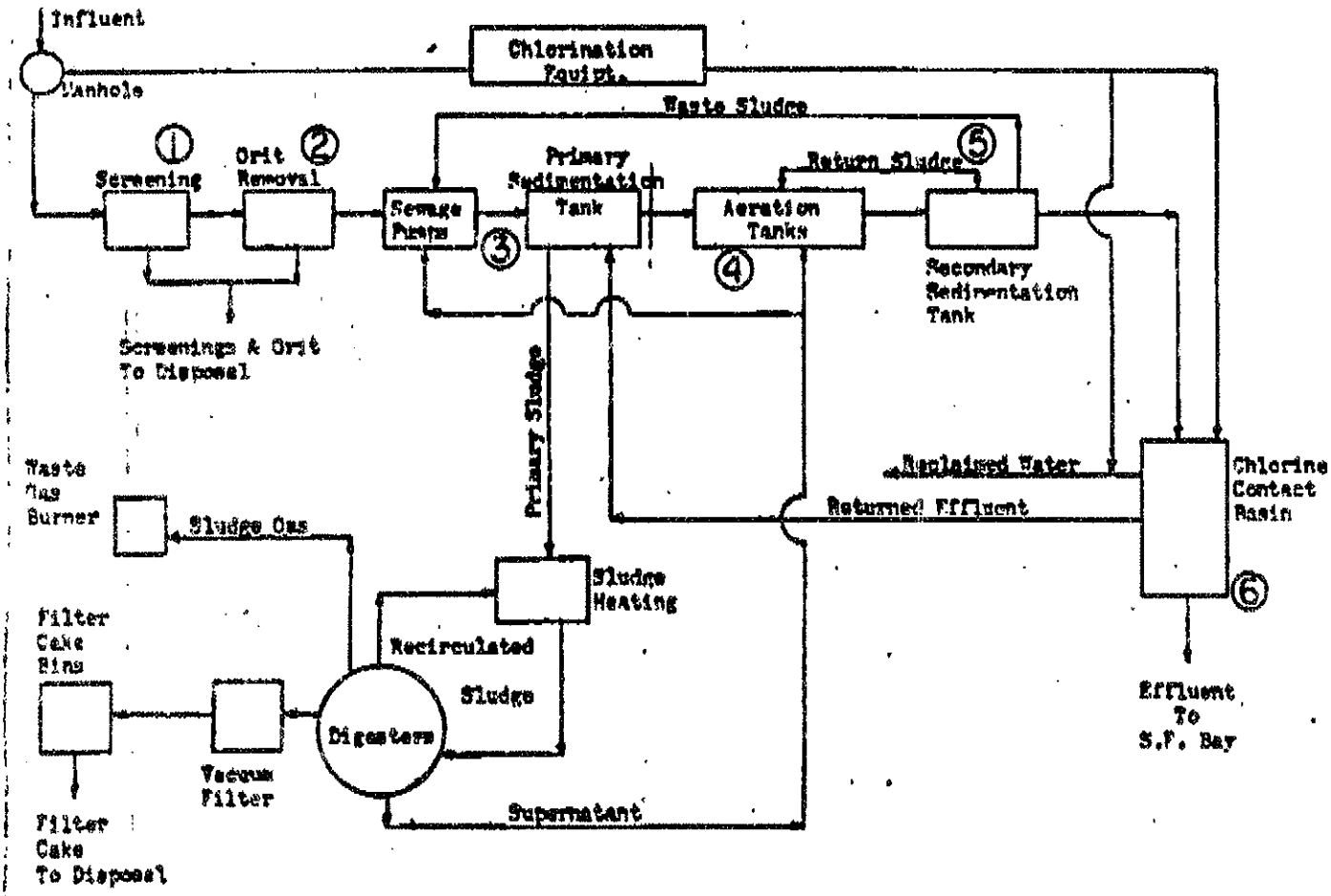
[File No. 2179.7032]
[Originator/SMM]
[Reviewer/JDW]

Post-it™ Fax Note 7671	Date 2/28/95	pages ▶ 2
To STEVEN MOORE	From MEL LEONG	
Co./Dept.	Co. AIRPORT	
Phone # 286-1262	Phone # 737-7783	
Fax # (510) 286-1380	Fax # 876-2258	

Attachment A, Order No. 95-054



Attachment B, Order No. 95-054



PLANT PROCESS

SCHEMATIC FLOW DIAGRAM

Attachment C, Order No. 95-054

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

CITY AND COUNTY OF SAN FRANCISCO
SAN FRANCISCO INTERNATIONAL AIRPORT
WATER QUALITY CONTROL PLANT
AND
NORTH BAYSIDE SYSTEM UNIT
SAN MATEO COUNTY

NPDES PERMIT NO. CA0038318
ORDER NO. 95-054

CONSISTS OF

PART A (dated August 1993)

AND

PART B

SAN FRANCISCO INTERNATIONAL AIRPORT
WATER QUALITY CONTROL PLANT
NORTH BAYSIDE SYSTEM UNIT
SELF MONITORING PROGRAM
ORDER NO. 95-054

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT

Station	Description
A-001	At any point in the treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment, and exclusive of any return flows or process sidestreams.

B. EFFLUENT

Station	Description
E-001	At any point in the plant after disinfection between the point of discharge into the combined forcemain-outfall and the point at which all waste from the treatment plant is present.
E-002	At any point in the NBSU combined outfall after dechlorination between the point of discharge into San Francisco Bay and the point at which all waste tributary to the NBSU combined outfall is present.

C. RECEIVING WATERS

Station	Description
C-1	At a point in San Francisco Bay located over the geometric center of the outfall's discharge ports.
C-2	At a point in San Francisco Bay located midway between C-1 and C-3.
C-3	At a point in San Francisco Bay located in the center of the effluent plume.
C-50-SW	At a point in San Francisco Bay, located 50 feet southwesterly along the outfall line, shoreward from Station C-1.

C-50-NW	At a point in San Francisco Bay, located 50 feet northwesterly from Station C-1, normal to the outfall line.
C-50-NE	At a point in San Francisco Bay, located 50 feet northeasterly from Station C-1, along the outfall line extended.
C-50-SE	At a point in San Francisco Bay, located 50 feet southeasterly from C-1, normal to the outfall.
C-300-N through C-300-NW (8 stations)	At a point in San Francisco Bay located on a 300-foot radius from the geometric center of the outfall diffuser, at equidistant intervals, with Station C-300-SW located shoreward from Station C-1 at the outfall line.
C-R-NW	At a point in San Francisco Bay located approximately 1,500 feet northwesterly from the point of discharge.
C-R-SE	At a point in San Francisco Bay located approximately 1,500 feet southeasterly from the point of discharge.

D. LAND OBSERVATIONS

Station	Description
P-1 through P-*n*	Points along the perimeter of the wastewater treatment or disposal facilities, at equidistant intervals not to exceed 500 feet.

Note: A sketch showing the locations of these stations shall accompany each monthly report and the annual report for each calendar year.

E. OVERFLOWS AND BYPASSES

Station	Description
OV-1 through OV-*n*	At points in the collection system including manholes, pump stations, or any other location where overflows and bypasses occur.

Notes: (1) A map and description of each known overflow or bypass location shall accompany the annual report for each calendar year.

(2) Each occurrence of an overflow or bypass shall be reported to the Regional Board in accordance with the reporting requirements specified in Sections F.1 and F.2 of Part A.

II. SCHEDULE OF SAMPLING, MEASUREMENTS, AND ANALYSIS

The schedule of sampling, measurements, and analysis shall be that given as Table 1 (and Table 1 footnotes).

III. MODIFICATIONS TO PART A

A. This monitoring program does not include the following sections of Part A: C.5 and D.4.

B. Paragraph G.5 of Part A is revised to read:

Average weekly and monthly values are calculated as the sum of all daily discharge values measured during the specified period (calendar week or calendar month), divided by the number of daily discharge values measured during that specified period.

IV. REPORTING REQUIREMENTS

A. Self-monitoring reports for each calendar month shall be submitted monthly, to be received no later than the 15th day of the following month. The required contents of these reports are specified in Section F.4 of Part A.

B. An annual report covering the previous calendar year shall be submitted to the Regional Board by January 30th of each year. The required contents of the annual report are specified in Section F.5 of Part A.

C. Any overflow, bypass, or other significant non-compliance incident that may endanger public health or the environment shall be reported according to Sections F.1 and F.2 of Part A.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing self-monitoring program:

1. Has been developed in accordance with the procedure set forth in the Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order 95-054.

2. Was ordered by the Board on March 15, 1995.

3. May be reviewed at any time subsequent to the above date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

STEVEN R. RITCHIE
EXECUTIVE OFFICER

Attachments: Table 1 with footnotes, Table 2
Part A of Self-Monitoring Program, dated August 1993

Table 1

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS (1)

Sampling Station		A-001	E-001			E-002			All C Sta.	All P Sta.	All OV Sta.
TYPE OF SAMPLE	Units	C-24	G(3)	C-24	Cont.	G(3)	C-24(9)	Cont.	G(10)	O	O
Flow Rate	mgd				Cont.			Cont.			
CBOD, 5-day, 20 deg C; or COD	mg/l & kg/day	2/W		3/W			5/W				
Chlorine Residual & Dosage	mg/l & kg/day		2H or Cont. (5)			2H or Cont. (5)					
Total Suspended Solids	mg/l & kg/day	2/W		5/W			5/W				
Oil & Grease	mg/l & kg/day	M(2)	M(2)			2M(2)					
Settleable Matter	ml/l-hr & cu. ft./day		D			D					
Coliform (Total or Fecal)	MPN/100 ml		3/W			5/W			M(4)		
Fish Toxicity 96-hr.	% surv'l in undiluted effl.				M(8)		M(9)				
Ammonia Nitrogen & Un-ionized Ammonia	mg/l & kg/day	M			M(7)		M(6)		M		
Nitrate Nitrogen	mg/l & kg/day				M(7)		M(6)				
Nitrite Nitrogen	mg/l & kg/day				M(7)		M(6)				
Total Organic Nitrogen	mg/l & kg/day	M									
Turbidity	NTU			D			M		M		
pH	pH units		D(11)			D			M		
Dissolved oxygen	mg/l and % Saturation		D(11)			D			M		
Temperature	deg C		D(11)			D			M		
Secchi Disc	inches								M		
Sulfides (if DO<5.0 mg/l) Total & Dissolved	mg/l		D			D			M		
Arsenic	ug/l & kg/day			M(12)							
Cadmium	ug/l & kg/day			M(12)							
Chromium (VI)	ug/l & kg/day			M(12)							
Copper	ug/l & kg/day			M(12)							
Lead	ug/l & kg/day			M(12)							
Mercury	ug/l & kg/day			M(12)							
Nickel	ug/l & kg/day			M(12)							
Selenium	ug/l & kg/day			M(12)							
Silver	ug/l & kg/day			M(12)							
Zinc	ug/l & kg/day			M(12)							
Cyanide	ug/l & kg/day			M(12)							
Phenol	ug/l & kg/day			Q(12)							
PAHs	ug/l & kg/day			Q(12)							
Constituents in Table 2 (14)	ug/l & kg/day			(14)							
All Applicable Standard Observations			D			D			M	E	E
Daily Rainfall										D	
Dewatered Sludge										D(13)	

LEGEND FOR TABLE 1

TYPES OF SAMPLES

G = grab sample
C-24 = 24-hour composite sample
Cont = continuous sampling
O = observation

TYPES OF STATIONS

A = treatment facility influent stations
E = waste effluent stations
C = receiving water stations
P = treatment facility perimeter stations
OV = overflows and bypasses

FREQUENCY OF SAMPLING

E = each occurrence	2/H = twice per hour	2H = every 2 hours
H = once each hour	2/W = 2 days per week	2D = every 2 days
D = once each day	5/W = 5 days per week	2W = every 2 weeks
W = once each week	2/M = 2 days per month	2M = every 2 months

Cont = continuous
Q = quarterly, once in March, June, September, and December

TABLE 1 FOOTNOTES

(1) During any day when bypassing occurs from any treatment unit(s) in the plant or to the emergency outfall, the monitoring program for the effluent and any nearshore discharge shall include the following in addition to the above schedule for sampling, measurement, and analyses:

a. Composite sample for CBOD and Total Suspended Solids for the duration of the bypass event. Unless regular 24-hour composite samples are available, sampling shall consist of one grab sample during the first two hours of bypassing and grab samples every four hours afterward, for the duration of the bypass. The grab samples will be combined on a flow-proportioned basis and analyzed as a composite sample.

b. Grab samples at least daily for the duration of the bypass event for Total Coliform, Settleable Matter, Oil & Grease, and Chlorine Residual (continuous or every two hours).

c. Continuous monitoring of bypassed flow.

(2) Oil and Grease sampling shall consist of 3 grab samples taken at 8-hour intervals during the sampling day with each grab collected in a glass container and analyzed separately. Results for Stations A-001 and E-001 shall be expressed as a weighted average of the 3 values, based upon the instantaneous flow rates occurring at the time of each grab sample. Results for Station E-002 shall be expressed as a simple average

of the three values. If the plant is not staffed 24 hours per day or if the discharge does not occur continuously, then the three grab samples may be taken at approximately equal intervals during the period that the plant is staffed or during the period that the plant is discharging.

(3) Grab samples shall be taken on day(s) of composite sampling.

(4) 5 samples per station at Stations C-1, C-2, C-3, C-R-NW, and C-R-SE.

(5) Data shall be reported using forms provided or approved equivalent. Chlorine residual analyzers shall be calibrated against grab samples as frequently as necessary to maintain accurate control and reliable operation. If chlorine is detected, grab samples shall be taken every 30 minutes until compliance is achieved.

(6) These parameters shall be analyzed on the same composite sample used for the bioassay.

(7) These parameters shall be analyzed in the effluent when the flow-through bioassay test is in progress.

(8) Compliance with the effluent limitation for acute toxicity shall be determined using two species in parallel flow-through bioassays. One species shall be three-spine stickleback, and the other shall be either rainbow trout or fathead minnow. The sample may be taken from E-001 prior to disinfection instead of continuously dechlorinating E-001 effluent. Compliance with the toxicity limitation may be demonstrated after adjusting the effluent pH through the addition of concentrated sulfuric acid to minimize the concentration of un-ionized ammonia.

(9) The sample date for the bioassay and for one of all other specified parameters at E-002 shall coincide with date and times of Marine Magnesium Company's E-001 composite sample.

(10) Sampling shall be coordinated on the same date and approximate time as for the City of San Mateo and the South Bayside System Authority.

(11) Dissolved oxygen, temperature, and pH shall also be analyzed on the same sample(s) used for the bioassay(s) prior to starting the flow-through bioassay(s) and at intervals of 24, 48, 72, and 96 hours after starting the flow-through bioassay(s).

(12) If any of these toxic substances are found in excess of the permit limits (Effluent Limitation B.5), then sampling and analysis for the substances which exceed the permit limits shall be conducted weekly until compliance is demonstrated in two successive samples.

(13) Daily records shall be kept of the quantity and solids content of dewatered sludge that is disposed, and the location of disposal.

(14) For sampling frequency, refer to Provision E.8 of the NPDES permit. Constituents to be monitored are listed in the following table:

TABLE 2

TOXIC POLLUTANT MONITORING LIST FOR SAN FRANCISCO INTERNATIONAL AIRPORT WATER QUALITY CONTROL PLANT

Constituent
1,2 Dichlorobenzene
1,3 Dichlorobenzene
1,4 Dichlorobenzene
2,4,6 Trichlorophenol
Aldrin
α-BHC
Benzene
β-BHC
Chlordane
Chloroform
DDT
Dichloromethane
Dieldrin
Endosulfan
Endrin
Fluoranthene
γ-BHC (Lindane)
Halomethanes
Heptachlor
Heptachlor Epoxide
Hexachlorobenzene
PCBs (Total)
Pentachlorophenol
TCDD Equivalents [dioxin]
Toluene
Toxaphene
Tributyl tin